## REMARKS

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashimizu, JP 410091088 A (See Thomson-Derwent Translation JP10-91088A) in view of Gettemy et al., USPN 6,603,469 B1, Asprey, USPN 5,576,723, and Kubes et al., USPN 6,035,180. This rejection is respectfully traversed.

Regarding independent claims 1 and 6, the Examiner states that Takashimizu teaches a color electroluminescent display, comprising a plurality of different colored light emitting elements, Gettemy teaches switching a multicolor display to monochrome to save power, and that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the power saving method as taught by Gettemy with the electroluminescent display and method as taught by Takashimizu to reduce battery power consumption in a portable electronic device.

A closer inspection of Takashimizu reveals that rather than teach that displaying a monochrome image of a multi-color image signal using only one color saves power, such reference instead observes that there is a loss (a waste) of reactive power when driving pulses are applied to display elements that are not intended to display light. As an example of when this occurs (section [0009]), he mentions that only the green pixels should be driven when you are trying to display a green monochromatic image. He also mentions in section [0071] "for example, a red screen, only the pixel of R light emits, the pixel of G and B is not light-emitted. Therefore, it is not necessary to impress an anode pulse and a cathode pulse to the line by which the pixel of G and B has been distributed." His patent thus involves detecting entire image lines that don't have pixel data, and removing the drive pulses for that line. His power savings thus comes from preventing un-needed drive pulses, and not from any consideration of color versus monochrome. A closer inspection of Gettemy reveals that the proposed power saving monochrome mode depends on a very specific implementation of a "multi-mode" display, which relies upon two separate light sources. More specifically, Gettemy's color mode uses multi-color backlighting elements **650** in combination with an LCD layer **630** for color image pixel control, while his less energy consuming monochrome mode relies upon ambient lighting reflected from a transreflector **640** in combination with the LCD layer for monochrome image

pixel control, as described in col. 9, lines 51 – 55. Such energy saving transreflector mode, however, could not be applied to an electroluminescent display such as taught by Takashimizu, however, and in accordance with the present invention. As the methods and displays of Takashimizu and Gettemy can't be combined, the basic combination of teachings relied upon by the Examiner clearly can not establish a prima facie case of obviousness.

It is noted that the Examiner states "Gettemy invites one to consider the different display types", referencing col. 5, lines 50 – 55, also col. 6, lines 56 – 63. Although Gettemy states in col. 5, lines 49 – 51 "Any of a number of display technologies can be used," he is only stating that any of these display technologies can be used in a palmtop computer system, and he does not teach or enable how any of such alternative displays would be used in the described system. In col. 5, lines 52 – 55, he references a multi-mode display, and it is only that multi-mode display as described above that is enabled for use in the power saving mode that he describes. The Examiner further states that Gettemy col. 9, lines 26-29 invites one in the art to consider the display taught by Takashimizu by teaching "It is appreciated that any multi-mode display device can be used by the present invention color display consumes more energy than the monochrome device." Takashimizu's display, however, is not taught as a "multi-mode device" within the context taught by Gettemy; therefore Gettemy cannot be reasonably interpreted to be referring to Takashimizu's display. Accordingly, it is clear that there is no teaching or suggestion to combine the power saving method as taught by Gettemy with the electroluminescent display and method as taught by Takashimizu as proposed by the Examiner.

The further cited references also fail to address such basic deficiency in the proposed combination. The Examiner states Asprey teaches a digital image processing circuit for converting a color digital image to be displayed on the display to a monochrome image. (Asprey, col. 1, lines 20 – 25, col. 3, lines 17 – 35, 51 – 54, and figure 1). Asprey's circuit, however, is analog (not digital), and it does not convert the image to a monochrome image for display on a color display with reduced power consumption. The Examiner quotes Asprey (col. 2, lines 19 – 38) and suggests that Asprey invites the combination of Takashimizu, Gettemy and Asprey. In that quote, however, Asprey is describing an image artifact that occurs if a monochrome monitor is

driven incorrectly by simply discarding red and blue color channel information. Asprey's circuit is intended to correct this artifact, and not to save power when displaying an image on a color monitor. Kubes mentions an observation that he has found that the green/yellow electroluminescent material is the most efficient color, but there is no teaching to selectively employ such green/yellow elements in a multi-color electroluminescent display in accordance with the present invention. A prima facie case of obviousness accordingly has not been established with respect to independent claims 1 and 6. Dependent claims 2-4 and 7-9 are believed patentable for at least the same reasons.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashimizu in view of Gettemy et al., Asprey, and Kubes et al., as applied to claims 1 or 6 above, and further in view of Hill, Jr., USPN 5,790,096. The Examiner states that Hill teaches that the digital image processing circuit converts a color digital image to a monochrome digital image by combining 5/16, 9/16, and 2/16 of the red, green and blue color signals, respectively, and that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the weighting factors as taught by Hill with the electroluminescent display as taught by Takashimizu, Gettemy, Asprey, and Kubes to implement the properly balanced monochrome image. This rejection is respectfully traversed.

As previously explained, Hill discloses a controller for controlling all kinds of displays. In a first mode, the controller uses only the green portion of a video signal to drive the red, green and blue inputs of a color display to produce a monochrome image. Thus, in this mode, all of the color elements are driven (see Col 7, lines 16-20) by the same amount, and no power saved thereby. In a second mode, the controller converts a color image signal to a monochrome signal according to the weighting chart in Table 1, and the monochrome signal is then used to drive a monochrome display having only one color of light emitting elements (see Col 7, lines 21-30). Thus, this mode also is not directed towards saving power on a color display. Neither of these modes suggest Applicant's invention, which is to save power in a color electroluminescent display of the type having color emitting elements with different light emitting efficiencies by selectively driving only the color elements of the color display having the highest

light emitting efficiency with a converted monochrome image signal derived from an input color digital image. Further, the weighting factors for each color described in Hill with respect to conversion of a color signal to a monochrome signal do not relate to differential light emitting efficiencies for different color emitting elements, but rather to color mixing standards for obtaining desired monochrome color hues.

Accordingly, it is believed therefore that the Examiner has still failed to state a *prima facie* argument for obviousness, and Applicant is entitled to patentability of claims 1-10. In view of the foregoing remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the Examiner is earnestly solicited. Should the Examiner believe any remaining issues may be resolved via a telephone interview, the Examiner is encouraged to contact Applicants' representative at the number below to discuss such issues.

Respectfully submitted,

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.